NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review-Preliminary Review

Issue Date:

Region: Mooresville Regional Office
County: Gaston
NC Facility ID: 3600153
Inspector's Name: Carlotta Adams
Date of Last Inspection: 06/28/2016
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Daimler Trucks North America, LLC - Mt. Holly Plant

Facility Address:
Daimler Trucks North America, LLC - Mt. Holly Plant
1800 North Main Street
Mount Holly, NC 28120

SIC: 3711 / Motor Vehicles And Car Bodies
NAICS: 33612 / Heavy Duty Truck Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 2D .0503, 2D .0515, 2D .0516, 2D .0521 & 2D .0531
15A NCAC 2Q.0501(d)(1) and 2Q.0504
NSPS: 2D .0524 Subpart Dc & Subpart JJJJ
NESHAP: MACT Subpart MMMM, Subpart PPPP & MACT ZZZZ
PSD: VOC PAL [40 CFR §51.165(f)]
PSD Avoidance: NA
NC Toxics: 15A NCAC 2Q .0702(a)(27)(B)
112(r): NA
Other: NA

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Eric Moser Environmental Engineer (704) 822-7034 1800 North Main Street Mt. Holly, NC 28120	Jane Rosaasen Logistics Director (704) 822-7486 1800 North Main Street Mt. Holly, NC 28120	Eric Moser Environmental Engineer (704) 822-7034 1800 North Main Street Mt. Holly, NC 28120

Application Data

Application Number: 3600153.16A
Date Received: 10/19/2016
Application Type: Modification
Application Schedule: TV-Significant

Existing Permit Data
Existing Permit Number: 03926/T44
Existing Permit Issue Date: 08/01/2017
Existing Permit Expiration Date: 10/31/2018

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2015	0.0700	8.91	226.67	8.34	3.22	2.26	0.9745 [Xylene (mixed isomers)]
2014	1.27	6.53	195.45	7.74	3.80	0.5339	0.1605 [Hexane, n-]
2013	0.0800	8.65	256.86	9.03	3.47	3.61	1.05 [Ethyl benzene]
2012	0.0800	7.12	218.71	7.67	2.89	3.61	1.02 [Ethyl benzene]
2011	0.0700	6.69	167.60	7.44	8.25	6.24	3.79 [Xylene (mixed isomers)]

Review Engineer: Gautam Patnaik

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue: 03926/T45
Permit Issue Date:
Permit Expiration Date:

I. Introduction and back ground

Daimler Trucks North America LLC (Daimler) owns and operates a truck manufacturing plant and is currently categorized under Standard Industrial Classification (SIC) code 3711. The facility is located in Mount Holly, Gaston County, NC. The facility is currently operating in accordance with North Carolina Department of Environmental Quality (DEQ) Title V Permit No. 03926T44 issued on August 1, 2017, which is scheduled to expire on October 31, 2018.

Due to an increase in demand for heavy duty trucks and increase in customer requests for certain types of finishes on their trucks, Daimler plans to increase production at the Mt. Holly facility, which will increase the emissions of volatile organic compounds (VOCs) and thus the need to increase the Plant-wide Applicability Limit (PAL) for the facility.

The Riverbend Township of Gaston County, where this facility is located, was previously classified as marginal nonattainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). On April 16, 2015, the NC DAQ submitted a request to re-designate the entire Charlotte-Rock Hill area from nonattainment to attainment for the referenced NAAQS. On May 21, 2015, the EPA published a proposal in the Federal Register to re-designate the area to attainment. See (Section "VI. Actual PALs - Re-designation," of this review, below)

II. Existing Facility Description

The "Spray coating and assembly operations (ES-SCAO)" are currently permitted as follows:
Spray Coating and Assembly Operation (ES-SCAO) with the following (note - change in source description and ID Nos.)

- Fifteen paint spray booths (ES-Chassis, ES-Seamseal Paint Booth, ES-Shipping Paint Booth, ES-Prep Lane, ES-Ecoat, ES-Offline 1, ES-Offline 2, ES-Offline Combo, ES-CRC Booth, ES-Wheel Booth, ES-Topcoat Booth 3, ES-Topcoat Booth 2, ES-Topcoat Booth 4, ES-Topcoat Booth 1, and ES-Pit Exhaust);
- Five paint drying ovens (ES-Chassis Paint Drying Oven, ES-Seamseal Paint Drying Oven, ES-Ecoat Oven, ES-Topcoat Oven 1, and ES-Topcoat Oven 2);
- One flash off area (ES-Flashoff Area);
- Three sanding booths (ES-Hood Prep, ES-Stripe, and ES-Blowoff Booth);
- One ECoat operations (ES-ECoat), consisting of the following equipment:
    - Two 12,000 gallon RO Storage tanks;
    - Two 12,000 gallon RO rinse tanks;
    - One 22,000 gallon E-coat tank;
    - Two 11,000 gallon E-coat transfer tanks;
    - One 12,000 gallon permeate waste transfer tank and
    - One 6,000 gallon fresh resin storage tank;
- Various operations including gluing, caulking, seamseal, solvent wipe, cleanup solvent and other non-coating sources of VOC (ES-1);
- One paint mix room/storage area (ES-PMR1) and
- One paint mix room/storage area (ES-PMR2)

The other sources include:
Two 33.6 MMBtu/hr (each) natural gas/propane/No. 2 fuel oil fired boilers (ES-BLR-02 and ES-BLR-05);
One 5.5 MMBtu/hr natural gas fired boiler (ES-ECoat-Boiler);
One (1) Cab pretreatment line consisting of: spray pre-clean/degrease, immersion pre-clean/degrease, spray rinse, immersion rinse, spray rinse, immersion DI rinse with recirculated DI water, spray DI rinse with fresh DI water (IES-EC-3A) *(insignificant source)*;
Welding operations consisting of:

5th wheel welding with in-line duct filters (ES-WE-2); and
Fuel tank welding with in-line duct filters (ES-WE-5).
Three (3) Emergency fire pumps with diesel fired engines with ratings of 182, 240, and 240 hp, respectively (ID Nos. IESFP1 through IESFP3) *(insignificant source)*;
One (1) 131.4 hp Natural gas fired emergency generator (IES-GEN) *(insignificant source)*;
Various other insignificant activities, including:
One (1) 10,000 gallon antifreeze tank (IES-1);
Two (2) 10,000 gallon diesel fuel tanks (IES-2 & 3);
Three (3) 10,000 gallon purge solvent tanks (IES-4 through 6);
Miscellaneous combustion sources (IES-7);
One (1) distillation unit with exhaust (IES-8);
Two (2) propane vaporizers (1.440 MMBtu/hr and 0.833 MMBtu/hr maximum heat input each) (IES-9);
Four (4) cooling towers (IES-10);
Multiple parts washers (IES-11);
Two (2) dynamometers for truck diagnostics testing (IES-12);
Truck tail pipe exhaust for truck diagnostics testing (IES-13) and
One (1) 10,000 gallon antifreeze tank (IES-14).
Western Star Welding Operations (IES-15)

On July 11, 2017, Daimler submitted a letter to the regional office and added the above Western Star welding operations (IES-15). In the letter, the insignificant activity was listed as IS-WSW. The ID has been updated above to be consistent with the insignificant source ID numbering sequence that is used in the current permit.

No other equipment will be added or modified.

III. Purpose of Application No. 3600153.16A

Due to an increase in demand for heavy duty trucks and an increase in customer requests for certain types of finishes on their trucks, the facility plans to increase production by up to 60,000 trucks per year (12-month rolling average, manufacturing 200 trucks/day and 300 days per year).

The facility is planning a significant increase in truck production combined with other changes in the finishes. These changes will result in a VOC emissions increase above the PAL limit, which will trigger PSD review for emissions from the spray coating and assembly operations.

The facility does not propose any changes to the NO_x emissions or the CO_{2e} emissions in this application.

The initial application was a PSD/PAL application with a requested BACT limit and a PAL limit (3600153.15B). This new PAL limit would have contravened with the existing PAL limit in the permit. Thus, the original application (3600153.15B) could only have been processed as a Significant 2Q .0501(d) modification (one step) with a 30-day public notice and 45 day EPA review.

The applicant requested that this modification to increase the VOC PAL be split into two separate applications (3600153.15B and .16A). This was done as follows:

1) Application (3600153.15B) to establish a VOC BACT limit for the increase in truck production was processed as a PSD application (15A NCAC 2Q .0501(c)(2)), satisfying the permitting requirements in 15A NCAC 2D .0530, "Prevention of Significant Deterioration," with a 30-day public notice and a 30-day EPA review period). The resulting permit for this application, Air Quality Permit No. 03926T44, was issued on August 1, 2017.

2) This current application (3600153.16A) will be processed as a PSD/PAL 15A NCAC 2Q .0501(d)(1)/ 02Q .0504 significant modification (with a 30-day public notice and a 45-day EPA review period). The PAL and BACT limit for VOC emissions will be adjusted during this application process.

V. Regulatory Summary:

Due to increased production, most of the sources at the facility will be affected and the following regulatory discussion pertains to the Federal and State regulatory requirements that are applicable to majority of the sources:

- 15A NCAC 2D .1111, MACT Subpart MMMM: "Surface Coating of Miscellaneous Metal Parts and Products"

- 15A NCAC 2D .1111, MACT Subpart PPPP: "Surface Coating of Plastic Parts and Products"

- 15A NCAC 2D .0952:"Petition for Alternative Controls for RACT for 15A NCAC 2D .0967 Miscellaneous Metal and Plastic Parts Coatings"

- 15A NCAC 2D .1111, MACT Subpart ZZZZ: "Stationary Reciprocating Internal Combustion Engines (RICE) MACT"

- 15A NCAC 2D .1109: CAA § 112(j): Case-by-Case MACT for Boilers & Process Heaters

- 15A NCAC 2D .0524: "NSPS 40 CFR 60, Subpart Dc"

- 15A NCAC 2D .0503: "Particulates from fuel Burning Indirect Heat Exchangers"

- 15A NCAC 2D .0958: "Work Practices for Sources of Volatile Organic Compounds"

- 15A NCAC 2D .0516: "Sulfur Dioxide Emissions from Combustion Sources"

- 15A NCAC 2D .0521: "Control of Visible Emissions"

- 15A NCAC 02D .0515: "Particulates from Miscellaneous Industrial Processes"

- 15A NCAC 2D .1100: "Control of Toxic Air Pollutants"

(See attached the Preliminary and Final Determination for application # 3600153.15B)

- 15A NCAC 2D .0530: "Prevention of Significant Deterioration"

The facility currently has a BACT limit for the spray coating and assembly operations (ES-SCAO) to discharge no more than 1,365 tons per year of VOC based on a 12-month rolling average along with the stipulation that the VOC content of the coatings used at the facility shall not exceed 3.5 pounds per gallon as applied on a calendar monthly average basis (Section 2.1 B. 4. a. i., of the current permit).

The reason to currently have a VOC PAL limit which was lower than the existing BACT limit was explained by the applicant as follows: "by rule, the PAL is based on actual emissions. For the period prior to the PAL, the actual emissions were 276.9 + 40 = 316.9. The area was nonattainment since back in the early to mid-2000s up until July 28, 2015. Thus, we could not perform a PSD and get an increase. The only mechanism for a permit increase would have been to request a NAA-NSR permit and apply LAER. The

facility could not afford to go to NAA-NSR and add controls (as our BACT analysis has shown). As such, the best option was a PAL. Now with attainment, the facility could go through PSD and increase the PAL to meet the proposed expansion plans."

The applicant had initially requested (application # 3600153.15B) that this BACT limit be lowered from 1,365 tons per year to 750 tons per year of VOCs for the same source. This request was not possible since the application (3600153.15B) was subject to a **30-day** EPA review period and would have contravened an existing limit.

However, this application (application # 3600153.16A) will be subject to a 45-**day** EPA review period and this change is being made with this application. The BACT limit for the spray coating and assembly operations (ES-SCAO) to discharge no more than 750 tons per year of VOCs based on a 12-month rolling average along with the stipulation that the VOC content of the coatings used at the facility shall not exceed 3.5 pounds per gallon as applied on a calendar monthly average basis (Section 2.1 B. 4. a. i., of the modified permit).

Also, see (Section "III. Purpose of Application No. 3600153.16A," of this review, above)

VI. Actual PALs

The PAL is a component of both the PSD regulations and NA-NSR regulations. Section 40 CFR § 51.166(w) provides provisions in paragraphs (w)(1) through (15) of this section in setting up the Actuals PALs. Also, 40 CFR §51.165(f) addresses PAL in a non-attainment area.

VOCs, PM, PM_{10}, $PM_{2.5}$, SO_2, and other byproducts of combustion are emitted from the emissions sources located within the spray coating and assembly operations. There is a current PAL for VOC, NO_x and CO_{2e} emissions.

The facility submitted an application in 2012 requesting a plant-wide applicability limit (PAL) for volatile organic compounds (VOC), nitrogen oxides (NO_x), and carbon dioxide equivalent (CO_{2e}) to maximize its operational flexibility for the site.

Because of the non-attainment designation for Gaston County for VOC at that time, the facility requested the VOC PAL in accordance with NA-NSR regulations (40 CFR§51.165 and 15A NCAC 2D .0531) and the NO_x and CO_{2e} PAL in accordance with the PSD regulations (40 CFR § 51.166 and 15A NCAC 2D .0530). The facility proposed a VOC PAL of 316.9 TPY, NO_x PAL of 56.4 TPY and a CO_{2e} PAL of 93,463 TPY for the facility. The following PALs were established and are contained in Section 2.3 of the current permit, as listed below:

Pollutant	PAL limits TPY
VOC	316.9
NO_X	56.4
CO_{2e}	93,463

The effective date for these PALs was April 1, 2013 and the expiration date is March 31, 2023. Because of the proposed changes in production levels, the facility expects that the PAL for VOC will be exceeded.

The Mt. Holly facility is located at the Riverbend Township of Gaston County and the area was previously classified as marginal nonattainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). On April 16, 2015, the NC DAQ submitted a request to re-designate the entire Charlotte-Rock Hill area from nonattainment to attainment for the referenced NAAQS.

As per the "State Implementation Plan for the Charlotte-Gastonia-Salisbury, North Carolina 2008 Ozone Marginal Nonattainment Area" prepared by North Carolina Department of Environment and Natural Resources, Division of Air Quality on July 7, 2014, the Mt. Holly facility is located at the Riverbend Township of Gaston County and the area is currently classified as marginal nonattainment for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS). As per discussion with Mr. Randy Strait, Supervisor, Attainment Planning Branch of DAQ the Division of Air Quality, Gaston County is under a maintenance plan.

As per the "Federal Register / Vol. 80, No. 44 / Friday, March 6, 2015 / Rules and Regulations" which is for "Implementation of the 2008 National Ambient Air Quality Standards for Ozone - State Implementation Plan Requirements" and provides anti-backsliding provisions which states "for areas designated attainment for the 2008 ozone NAAQS but nonattainment for the 1997 ozone NAAQS, the EPA proposed that after the 1997 ozone NAAQS is revoked, these areas would not be required to retain in their SIPs nonattainment NSR programs for ozone. Instead, such areas would be required to implement PSD requirements for ozone."

Daimler Trucks owns and operates another facility (the Cleveland Plant) in Rowan County which is in the Cleveland township. Since the Cleveland township is not part of the "2008 Ozone Marginal Nonattainment Area," adjusting the PAL for the Daimler Trucks North America - Cleveland Plant was done under the PSD requirements. (The PSD/PAL application # 3600153.15B for this facility, and Air Quality Permit No. 04625T34 issued on November 8, 2016).

However, for Daimler Trucks North America, LLC - Mt. Holly Plant located at the Riverbend township of Gaston County, the above Federal Register does not provide PAL adjustment provisions.

Re-designation

Mr. Randy Strait in an e-mail on 9/6/2017, stated "The Charlotte maintenance plan for the 2008 ozone standard is located on our website at:
https://files.nc.gov/ncdeq/Air%20Quality/planning/metrolina/Charlotte_2008_Ozone_Redesignation_and_Maintenance_SIP_with_RVP_Demo_Final_Rev_04-21-15.pdf

Pages 1-25 of the PDF contain the Section 110(l) noninterference demonstration for removing the summertime RVP requirement in Gaston and Mecklenburg Counties.
Pages 26-91 of the PDF contain the maintenance plan after relaxing the RVP in Gaston and Mecklenburg Counties; it is this plan that EPA approved.

Page 61 of the PDF, Section 6, first paragraph, states:
"Section 107(d)(3)(E)(v) of the CAA requires that the provisions of Section 110 (State Implementation Plans for the Primary and Secondary NAAQS) and Part D (Plan Requirements for Nonattainment Areas) of the CAA be met within the area to be redesignated. This means that North Carolina must meet all requirements, if any, that had come due as of the date of the redesignation request."

This statement covers the nonattainment NSR provisions for the Charlotte area as applicable to Part D, Subpart 2 marginal area designations.

"The NOx and VOC emissions included in the 2014 base year inventory and forecast to 2026 for the Daimler plant are located in Appendix B.1, Table 4.2-2a Gaston County Total NOx Emissions (tons/day) [page 26 of the

PDF] and Table 4.2-2b Gaston County Total VOC Emissions (tons/day) [page 27 of the PDF]. The 2014 base year emissions are what the plant reported to DAQ. Growth factors were applied to the 2014 year emissions to estimate future year emissions. Note that the future year emissions are not limits; they are just our best estimates of future year emissions at the time the forecast was prepared."

In another e-mail on 9/12/2017 Mr. Strait elaborated: "In case it is helpful, below I copied the second paragraph that follows the one I copied from Section 6.0 of the maintenance plan.

Section 6.0 STATE COMPLIANCE WITH CLEAN AIR ACT REQUIREMENTS

Section 107(d)(3)(E)(v) of the CAA requires that the provisions of Section 110 (State Implementation Plans for the Primary and Secondary NAAQS) and Part D (Plan Requirements for Nonattainment Areas) of the CAA be met within the area to be redesignated. This means that North Carolina must meet all requirements, if any, that had come due as of the date of the redesignation request.

The EPA, in its latest guidance on redesignation requirements (as contained in a memorandum from John Calcagni, Director, Air Quality Management Division, Office of Air Quality Planning and Standards to the EPA Regional Offices dated September 4, 1992, see Appendix A), states that "For the purposes of redesignation, a state must meet all requirements of Section 110 and Part D that were applicable prior to submittal of the complete redesignation request. When evaluating a redesignation request, Regions should not consider whether the state has met requirements that come due under the Act after submittal of a complete redesignation request."

The existing VOC and NO_x PALs for the subject facility were established under 40 CFR § 51.165(f), the PAL having originally been for a non-attainment area. Pursuant to 40 CFR §51.165(f)(11) "Increasing a PAL during the PAL effective period" is also accomplished under 51.165(f).

Increasing the PAL for VOC Emissions

40 CFR § 51.165(f) address PAL in a non-attainment area and according to 40 CFR §51.165(f)(1)(i) "the reviewing authority may approve the use of an actuals PAL for any existing major stationary source (except as provided in paragraph (f)(1)(ii) of this section) if the PAL meets the requirements in paragraphs (f)(1) through (15) of this section." And 40 CFR §51.165(f)(1)(ii) restricts the reviewing authority to not allow an actuals PAL for VOC or NO_x for any major stationary source located in an extreme ozone nonattainment area.

40 CFR §51.165(f)(11) provides the procedures for increasing a PAL during the PAL effective period and the reviewing authority may increase a PAL emission limitation only if the major stationary source does the following:

A) The facility shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions units contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL [40 CFR §51.165(f)(11)(i)(A)];

The application identified the emission units contributing to the increase in emissions resulting in emissions greater than or equal to the existing PAL including the proposed changes in production levels that will result in emissions exceeding the current PAL for VOC. The affected emission units are mentioned in the table below:

Emission Source ID.	Source Description

ES-SCAO	Spray Coating and Assembly Operations – Booths and Ovens (including VOC from fuel combustion)
ES-BLR-02, ES-BLR-05 and ES-Ecoat-Boiler	Boilers
IESFP1 through IESFP3	Emergency fire pumps
IES-GEN	Emergency generator
IES-EC-3A	One Cab Pretreatment Line
Various	Air handling exchange units
Various	Storage tanks
Various	Parts Washer
Various	Dynamometer

B) As part of this application, the facility shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions units exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply [40 CFR §51.165(f)(11)(i)(B)];

This facility was never subject to a LAER (Lowest Achievable Emission Rate) and the last application (Application # 3600153.15B) established the BACT for the spray coating and assembly operation (ID Nos. ES-SCAO). The permit issued for this application Air Quality Permit No. 03926T44, issued on August 1, 2017, established a BACT limit of 3.5 lb VOC /gal as applied calendar monthly average for the sources in the spray coating and assembly operation (ID Nos. ES-SCAO).

Provisions to increase PAL during the effective period, the facility as outlined in 40 CFR §51.165(f)(11)(i)(B) and in the "Federal Register / Vol. 67, No. 251 / Tuesday, December 31, 2002 / Rules and Regulations (# 6 on Page # 80210), to increase PAL during the effective period, the facility "must demonstrate that the sum of the baseline actual emissions of your small emissions units, plus the sum of the baseline actual emissions from your significant and major emissions units (adjusted for a current BACT level of control unless the emissions units are currently subject to a BACT or LAER requirement that has been determined within the preceding 10 years, in which case the assumed control level shall be equal to the emissions unit's existing BACT or LAER control level), plus the sum of the allowable emissions of the new or modified existing emissions unit(s), ***exceeds the PAL***."

The source category for this source based on the attainment status of the area and pollutant is mentioned below:

Source Category	PTE
Small	< 40 tons
Significant emissions unit	≥ 40 but < 100

Major	> 100

The facility has elected not to differentiate between small, significant, and major emission units within the spray coating and assembly operations. Instead, the facility elected to develop a BACT for the entire spray coating and assembly operations (Application # 3600153.15B).

On discussions with the applicant it was more practical to have a 3.5 lb of VOC per gallon coating for the entire operation on a monthly average basis (Current BACT) as opposed to have to set individual limits per emission source within a coating operation such as a truck assembly line with multiple booths and ovens.

The VOC emissions from all other VOC emission sources (i.e., tanks, combustion sources, etc.) at the facility are considered small as referenced in 40 CFR §51.165(f)(11)(i)(B). As such, the emissions from these other small emission sources will be quantified in accordance with the requirements listed in 40 CFR §51.165(f) using baseline actual emissions and will be added to the BACT limit for the spray coating and assembly operations to set the new VOC PAL.

A complete BACT analysis for VOC was conducted for all VOC emitting spray booths and drying ovens located within the spray coating and assembly operations since the existing BACT limits for these units were not established within the preceding 10 years of application submittal (the current permit issuing the BACT for ES-SCAO was issued on August 1, 2017, and the previous BACT for the same source was established in 2001).

Based on the BACT (See attached the Preliminary and Final Determination for application # 3600153.15B), none of the existing emission units require a downward adjustment of the baseline emission levels, as emissions from these units meet current BACT requirements, since the BACT limits established for these sources in 2001 and the BACT established by BACT determination for application # 3600153.15B are the same i. e., "The VOC content of the coatings used at the facility shall not exceed 3.5 pounds per gallon as applied on a calendar monthly average basis (Section 2.1 B. 4. a. i., of the current permit).

As per the "Federal Register / Vol. 67, No. 251 / Tuesday, December 31, 2002 / Rules and Regulations (# 6 on Page # 80210) which states
"A*fter the reviewing authority has completed the major NSR process, and thereby determined the allowable emissions for the new or modified emissions unit(s), the reviewing authority will calculate the new PAL as the sum of the allowable emissions of the new or modified emissions unit(s), plus the sum of the baseline actual emissions of your small emissions units, plus the sum of the baseline actual emissions from significant and major emissions units adjusted for the appropriate BACT level of control as described above. Your reviewing authority must modify the PAL permit to reflect the increased PAL level pursuant to the public notice requirements."*

Adjusted PAL = sum of the baseline actual emissions of your small emissions units, plus the sum of the baseline actual emissions from your significant and major emissions units + plus the sum of the allowable emissions of the new or modified existing emissions unit(s)

As per 40 CFR §51.165(f)(11)(ii) the reviewing authority shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent

controls as determined in accordance with 40 CFR §51.165(f)(11)(i)(B), plus the sum of the baseline actual emissions of the small emissions units.

- ***The sum of the allowable emissions for each modified or new emissions unit include the*** spray coating operations and all components within the spray coating operations **that are being modified**. Thus, the VOC allowable emissions (see definition below) which are defined as the potential to emit are 750 TPY.

40 CFR §51.165(f)(2)(ii) defines "allowable emissions" as defined in 40 CFR §51.165(a)(1)(xi), except as this definition is modified according to paragraphs 40 CFR §51.165(f)(2)(ii)(A) through (B) of this section.

As per 40 CFR §51.165(a)(1)(xi) allowable emissions means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:
a) The applicable standards set forth in 40 CFR part 60 or 61;
b) Any applicable State Implementation Plan emissions limitation including those with a future compliance date; or
c) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

40 CFR §51.165(f)(2)(ii)(B) "An emissions unit's potential to emit shall be determined using the definition in paragraph (a)(1)(iii) of this section, except that the words "or enforceable as a practical matter" should be added after "federally enforceable."

Potential to emit in NSR is defined in 40 CFR 51.165(a)(1)(iii) as "Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source."

- ***Plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph 40 CFR §51.165(f)(11)(i)(B) of this section.***

For this application, the applicant is modifying the entire spray coating operations and there are no remaining significant and major units at the site. Thus, this number is 0.0 TPY (See below). The Spray Coating and Assembly Operations (ES-SCAO) will now have a new BACT limit of 750 TPY incorporated into the permit as a federally enforceable limit and thus, per 40 CFR 51.165(a)(1)(iii), emissions of 750 TPY of VOC from this source will be considered potential emissions (See Section 2.1 B. 4. a. i., of the modified permit).

- ***Plus the sum of the baseline actual emissions of the small emissions units –*** All combustion sources and volatile organic liquid storage tanks as a group are small emission units. The baseline actual emissions (BAE) was developed and the results were 0.5 TPY of VOC.

The other small emission unit is the dynamometers that were not previously estimated. The potential to emit PTE for these are 0.1 tpy.

As such the new PAL is the sum of 750.0 + 0.0 + 0.5 +0.1 = 750.6 TPY

The table below shows the Potential VOC emissions from all sources
(all emissions are in tons per year)

Source	VOC
ES-SCAO	750
ES-BLR-02 and ES-BLR-05	1.06
ES-Ecoat-Boiler	0.13
Other Combustion Sources	2.11
ES-WO	0
ES-FP1 through ES-FP3	0.4
ES-GEN	0.01
Storage Tanks	0.34
Propane Vaporizer	0.11
Cooling Towers	0
Parts Washer	0.4
Dynamometers	0.12
Total Emissions	754.71

754.71 tpy - including potential emissions of *750 from the "Spray coating and assembly operations (ES-SCAO)

Therefore the Adjusted PAL = sum of the baseline actual emissions of your small emissions units (0.6), plus the sum of the baseline actual emissions from your significant and major emissions units (0.0) + plus the sum of the allowable emissions of the new or modified existing emissions unit(s) (750) = 750.6 *TPY*[1].

Adjusted PAL (750.6 TPY) exceeds the existing PAL (316.9 TPY). Thus, the new PAL for the entire facility is 750.6 TPY. (See Section 2.3 A. a. i)., of the modified permit)

Note - The total VOC PAL is 750.6 TPY with 750.0 coming from the spray coating and assembly operations as the BACT for that area. Though the difference between the PAL and BACT is small. The PAL is for the entire facility and the BACT was for only the Spray Coating and Assembly Operations (ES-SCAO) since this was the only source subject to a BACT determination.

C) The facility obtains a major NSR permit for all emissions units identified above, regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions units shall comply with any emissions requirements resulting from the nonattainment major NSR program process [40 CFR §51.165(f)(11)(i)(C)]; and

The facility has already submitted a PSD application for an updated BACT analysis and an additional impacts analysis for the spray coating and assembly operations, which met the requirement to obtain a major NSR permit. The permit application included all the required elements of a major NSR permit application for the sources identified above, including the BACT analyses, the additional impacts analysis, a summary of the NC air toxics applicability and all required permit forms.

D) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant. Thus, in accordance with 40 CFR §51.165(f)(11)(i)(D), the new PAL level in the major NSR permit will become

[1] 750.6 TPY Net Increase includes emissions from the 0.5 TPY increase from Existing Small Sources + 0.1 TPY increase from the Dynamometers)

effective upon issuance of the NSR/PAL permit, as the existing operations are currently operational. (See attached the Preliminary and Final Determination for application # 3600153.15B) [40 CFR §51.165(f)(11)(i)(D)].

Some of the other requirements in setting up a PAL permit are addressed below:

Effective and Expiration Date of the PAL

As per 40 CFR §51.165(f)(2)(vi) the effective date for this PAL shall be on the date the permit is issued or satisfy criteria of 40 CFR §51.165(f)(11)(i)(D), above, and as per 40 CFR §51.165(f)(2)(vii) PAL effective period of 10 years. The effective and expiration date for the VOC is stipulated in Section 2.3 A. v). and vi)., of the modified permit.

Testing

If technically practicable, the applicant shall conduct validation testing to determine VOC emission factor within 6 months of PAL permit issuance as per 40 CFR §51.165(f)(12)(vi)(C) unless DAQ determines otherwise.

40 CFR §51.165(f)(12)(ix) requires all data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the reviewing authority. Such re-validation must occur at least once every 5 years after issuance of the PAL.

Monitoring and Record keeping

The applicant shall record on a daily basis all VOC containing materials used in the Spray-Coating and Assembly Operations. The coating usage, coating waste percentages and usage of cleanup solvent, caulk, glues, seam seals and any other non- coating sources of VOCs shall be monitored and recorded daily.

The applicant shall record monthly the natural gas, propane, No.2 fuel, and diesel oil burned in the two natural gas/propane/No.2 fuel oil fired boilers (ID Nos. ES-BLR-02 and ES-BLR-05); one natural gas boiler (ES-ECoat-Boiler); two propane vaporizers (IES-9); the gas-fired paint drying ovens; and the miscellaneous combustion sources (IES-7). The Permittee shall record the monthly hours of operation of the fire pumps (IESFP1, IESFP2, and IESFP3) and the natural gas generator (IES-GEN). Also, the applicant shall use the latest emissions factors in determining the monthly VOC emissions from the combustion of diesel fuel at the combustion sources.

The facility shall calculate the monthly VOC emissions from the Spray-Coating and Assembly Operations determined by a mass balance assuming all VOC-containing purchased materials in a month, minus the amount collected in waste drums, are used that month. This is calculated by multiplying VOC-containing materials usage by their VOC content. Purge solvent emissions shall be calculated based on a material balance of the amount purchased compared to the monthly beginning and monthly ending inventories.

The applicant shall use mass balance calculations for activities using coatings or solvents, including the purge solvent tanks, to calculate monthly emissions. The applicant shall use emission factors to calculate the monthly VOC emissions from the boilers, the vaporizers miscellaneous combustion sources, and paint drying ovens. The facility shall use emission factors for the fire pumps and the generator to calculate hourly potential emissions. The facility will record the monthly hours of operation for the fire pumps and generator to calculate monthly emissions. [40 CFR §51.165(f)(12)(ii)(a)]

The facility has requested to use potential emissions to calculate monthly emissions from four of the storage tanks (IES-1, IES2, IES-3 and IES-14), the parts washers, and the two dynamometers. The facility will use values greater than the potential emissions and will assume that VOCs are emitted equally for each month of the year. This is a very conservative quantification approach versus being required to conduct burdensome calculations from extremely small sources of VOC.

As per 40 CFR §51.165(f)(12)(vi) all emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development; The emissions units shall operate within the designated range of use for the emission factor, if applicable; and if technically practicable, the significant emissions units that rely on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factors within 6 months of PAL permit issuance, unless the DAQ determines otherwise. In accordance with 40 CFR §51.165(f)(12)(vi) DAQ has determined that validation testing is currently not required.

As required by 40 CFR §51.165(f)(7)(viii) the permit requires the applicant to retain a copy of all records necessary to determine compliance with the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record [40 CFR §51.165(f)(13)(i)].

(See Section 2.3 A. f., through r., of the modified permit).

Reporting

40 CFR §51.165(f)(14)(i) the semi-annual report shall be submitted to DAQ within 30 days of the end of each reporting period. This report shall contain the information required in 40 CFR §51.165(f)(14)(i)(A) through (G) (Section 2.3 A. s., and t., of the modified permit).

Data Validation

40 CFR § 51.165(f)(12)(ix) requires all data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the reviewing authority at least once every 5 years after issuance of the PAL.

VII. PSD Increment Tracking

The minor source baseline for Gaston County was triggered for PM_{10} on 05/16/89 by Gaston County MSW Facility, for SO_2 on 02/15/82 by Lithium Corp. of America and for NO_x on 05/16/89 by Gaston County MSW Facility.

For this application (3600153.16A) only the PAL is being adjusted with no hourly emissions increase or decrease to the facility therefore there is no emissions to be tracked (See Section III. "Purpose of Application," in this review above).

VIII. RACT, CAM, Compliance Status, Zoning Consistency Determination, Application Type and Removal of Section 2.4 of the current Permit.

RACT

The facility is located in Gaston County which was once a non-attainment area and is subject to RACT. The facility chose to comply with RACT by complying with MACT Subparts MMMM and PPPP.

CAM

The Compliance Assurance Monitoring (CAM) rule promulgated on November 21, 1997, is required for major units using control devices to comply with Federal Clean Air Act (FCAA) standards established prior to 1990.

This facility does not have any emission sources with uncontrolled emissions greater than the major source threshold and therefore are not subject to CAM. The CAM applicability status will not change as a result of this application.

Compliance Status

The latest inspection done on 08/08/2017 by Ms. Carlotta Adams of the Regional Office stated "Based on my observations during this inspection, this facility appeared to be in compliance with the applicable air quality regulations."

Consistency Determination

As per North Carolina General Statute § 143-215.108(f) and DAQ policy the applications for air quality permits for new or expanded facilities include a request for a zoning consistency determination. Under this requirement, the applicant must identify each local government having jurisdiction over any part of the land on which the facility and its appurtenances are to be located and must request a determination (zoning consistency determination) as to whether the local government has in effect a zoning or subdivision ordinance applicable to the facility and whether the proposed modification at the facility would be consistent with the ordinance. The request to the local government, to be delivered to the clerk of the local government personally or by certified mail, must include a copy of the draft permit application.

The consistency determination was provided by the facility for application (3600153.15B) when the BACT was being established due to increased production in the spray coating and assembly operations (ES-SCAO).

This application (3600153.16A) is to adjust the VOC PAL for the facility based on the above BACT, thus a consistency determination was not required for this application.

Application Type

(See Section III. "Purpose of Application," of this review, above).

Removal of Section 2.4 of the current Permit.

Section 2.4., of the current permit pursuant to 15A NCAC 2Q .0504 requires the applicant to file a "Title V" application on or before 12 months after commencing operation of the sources listed in spray coating and assembly operations (ES-SCAO).

This application (3600153.16A) is being processed as a PSD/PAL 15A NCAC 2Q .0501(d)(1)/ 02Q .0504 significant modification (30-day public notice and a 45-day of EPA review period). The applicant is not required to resubmit the application within 12 months of the issuance of the permit.

X. Public Notice/EPA, Regional Office & Applicant Review

Public Notice Requirements – 40 CFR 51.166(q) requires that the permitting agency make available to the public a preliminary determination on the proposed project, including all materials considered in making this determination. With respect to this preliminary determination the NCDAQ:

i) Will make available all materials submitted, a copy of the preliminary determination, and all other information submitted and considered.
ii) Will be posted on NCDAQ website.
iii) Send a copy of the draft permit and review to:
    a) The applicant,
    b) EPA Region IV and
    c) The Regional Office for comments

Please note – Unlike application (3600153.15B) a copy of the "public notice" will not be published in the local newspaper for this application (3600153.16A).

Regional Office, the applicant and the SSCB (Stationary Source Compliance Branch) were provided a draft of this permit and their comments taken into consideration.

Applicant's Comments on the Draft Permit and Review:

The applicant wrote back on 11/16/2017 requesting some changes the draft permit and review. The major changes to the draft permit are addressed below:

- Added and insignificant source Western Star welding operations (ID No. IES-15). As per the applicant "This insignificant source was added via a letter to the regional office dated July 11, 2017. It was initially ID'd as IS-WSW, but we have changed it to IES-15 to follow the numbering sequence in the current permit."

- Section 2.3 A. - Used the potential emissions for the fire pumps (ID Nos. IESFP1, IESFP2, and IESFP3), natural gas fired emergency generator (ID No. IES-GEN), antifreeze tank (IES-1), diesel fuel tanks (IES-2 and IES-3), antifreeze tank (IES-14), multiple pasts washers (IES-11) and two dynamometers (IES-12).

- Section 2.3 B. - Used the potential emissions for the two dynamometers (IES-12).
  Section 2.3 C. - Used the potential emissions for the two dynamometers (IES-12), as per the applicant "the PTE from these sources are 2224.8 TPY. Daimler would prefer to conservatively use 2,225 TPY (185.4 tons/month) to report for PAL compliance purposes."

  Section 2.3 C. g. - Added the option to use the Part 98 $CO2_e$ emission factors along with the latest AP-42 emissions factors.

- Section 2.3 B. (NO_x PAL) - Applicant wanted removal of part of Section 2.3 B. a. iii). This section requires the plant wide actual VOC emissions will remain less than 750.6 tons per rolling 12 months.

  During the review of VOC BACT application (3600153.15B) DAQ wanted to impose a production limit of 60,000 trucks per 12-month period for NO_x PAL to ensure that the facility stay within the NOx limit. However, the applicant had objected to this and agreed to take a VOC limit under the NO_x PAL. Thus, the above limit of VOC emissions of less than 750.6 tons per rolling 12 months is put in section 2.3 B. a. iv)., of the modified permit with a footnote referencing application (3600153.15B).

The major changes to the draft review are addressed below:

- The applicant wanted to mention in the review where ever it is referenced that area that the facility is located was previously classified as marginal nonattainment and is now in attainment

Talked with Mr. Randy Strait, Attainment Planning Branch Supervisor, on 11/7/2017. He mentioned that the applicant was correct. The attainment status of this area was published in the Federal Register / Vol. 80, No. 144 / Tuesday, July 28, 2015, and became effective on August 27, 2015[2].

- 40 CFR §51.165(f)(12)(vi) requires all emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development; The emissions units shall operate within the designated range of use for the emission factor, if applicable; and if technically practicable, the significant emissions units that rely on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factors within 6 months of PAL permit issuance, **unless the DAQ determines otherwise**.

  Applicant wanted to incorporate a statement at the end of the paragraph to state "DAQ has determined that validation testing is currently not required."

  The paragraph rephrased that statement to read "In accordance with 40 CFR §51.165(f)(12)(vi) DAQ has determined that validation testing is currently not required."

Regional Office's Comments on the Draft Review:

On 11/20/2017, Mr. Bob Caudle, P.E., Regional Office's environmental engineer commented only on the draft review and his comments were minor and incorporated into the review where applicable.

Public notice and EPA review:

This draft permit and review was send to a 30-day public notice and 45-day EPA review on xx/xx/2017. The comments received are addressed below:

XI. Recommendations

It is recommended that Air Quality Permit No. 03926T45 be issued.

[2] https://www.gpo.gov/fdsys/pkg/FR-2015-07-28/pdf/2015-18345.pdf

XII. Changes made in the proposed Permit.

The following table describes the changes in modified permit:

Pages	Section	Description of Changes
	Insignificant Activities	Added Western Star welding operations (IES-15)
8	2.1 B. Summary table of limits and standards	Changed BACT limit from 1,365 tons/yr of VOC to 750 tons/yr of VOC
10	2.1 B. 4. a. i.,	Changed BACT limit from 1,365 tons/yr of VOC to 750 tons/yr of VOC
26	2.3 A. a. i).,	Changed Actuals PAL from 316.9 to 750.6 tons per year of VOC emissions
26	2.3 A. a. i). & ii).,	Change of effective and expiration date of the VOC PAL
29	2.3 B. iii).,	Changed Actuals PAL from 316.9 to 750.6 tons per year of VOC emissions
	2.4	On Permit 03926T44 – Removed.